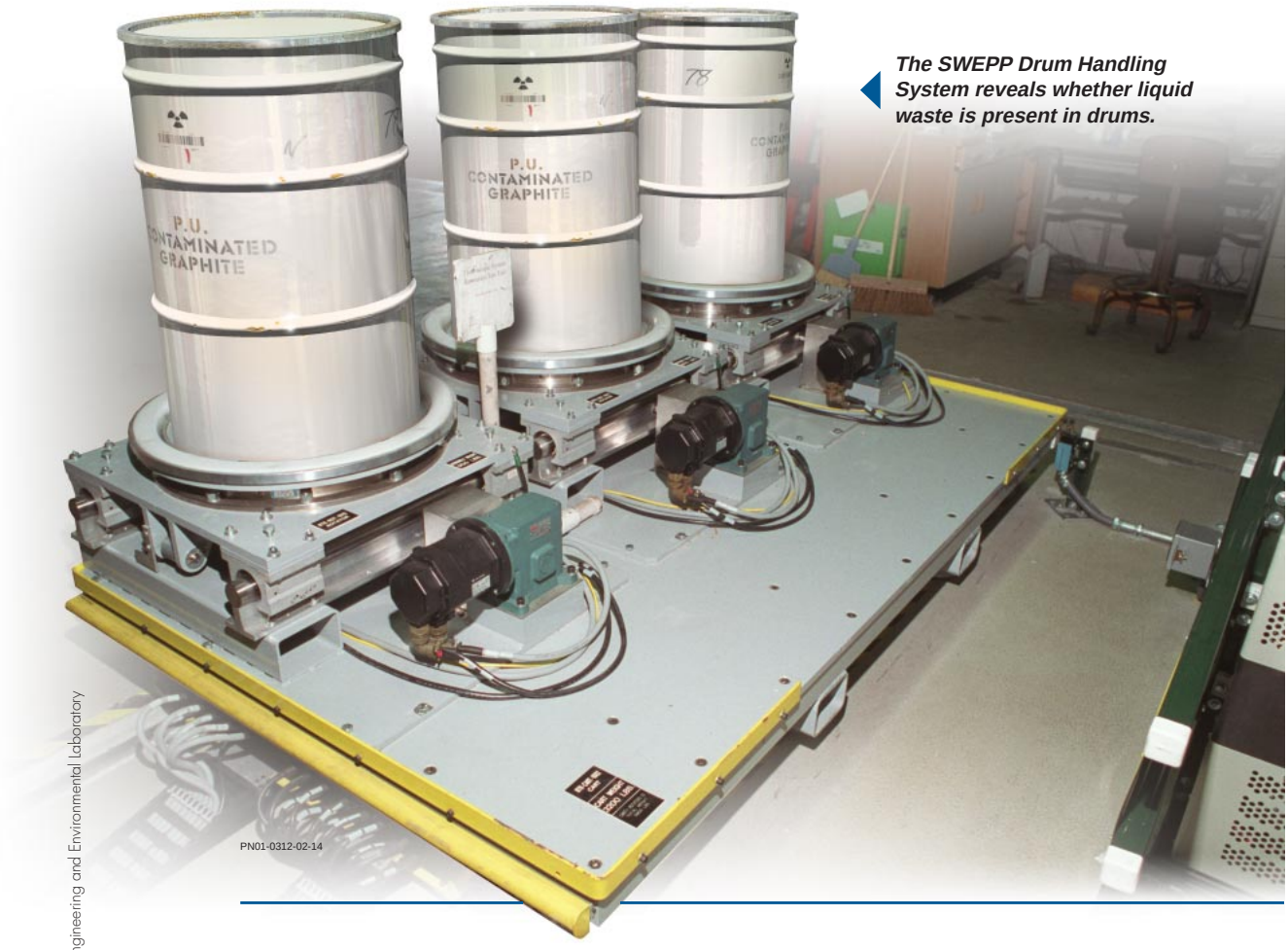
Makin' Waves



The SWEPP Drum Handling System reveals whether liquid waste is present in drums.

SWEPP RTR Drum Handling System Upgrade

According to the 1995 Settlement Agreement with the state of Idaho, 3,100 cubic meters of stored transuranic waste must be shipped out of state by December 31, 2002. Years earlier, the Stored Waste Examination Pilot Plant (SWEPP) was constructed to identify general contents of waste drums. After the plant was built, the Waste Isolation Pilot Plant (WIPP) released its waste acceptance criteria specifying that drums containing liquids would not be accepted. Although instruments at SWEPP were not intended to identify liquids,

Continued on back

This new drum handling system is durable enough to handle three drums at a time with the capability of jogging individual drums.

Idaho National Engineering and Environmental Laboratory
INEEL
Home of Science and Engineering Solutions

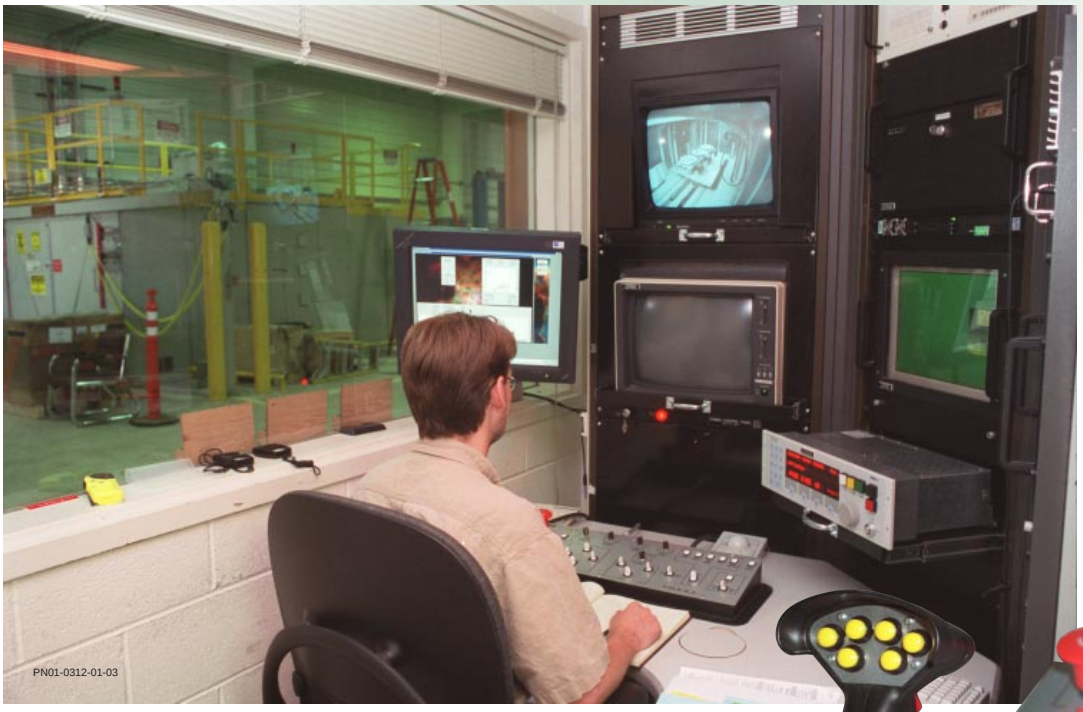
Continued from front

inspectors needed to determine specifically whether each drum contained liquid. Each drum needed to be jogged for liquid to be visible during x-ray examination. To shake the drums, the system was turned on and off—a practice that contributed to system failure. Engineers observed that the system needed to be redesigned to accommodate the identification of liquids.

Benefits:

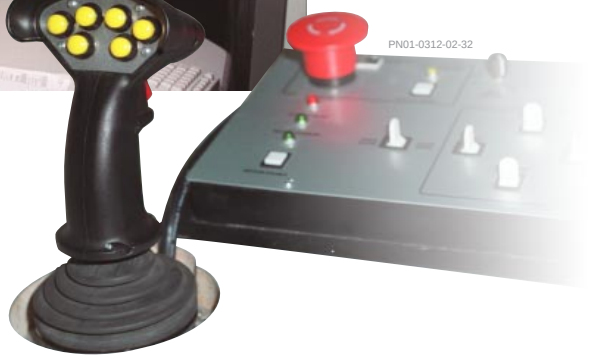
- Speeds characterization of drum contents, especially for liquids
- Increases system operability, reliability and efficiency
- Increases maintainability and reduces downtime
- Assists in meeting the 3,100 cubic meter shipment milestone

System operators tasked INEEL's research and development programs to design a more durable, reliable, and efficient material handling system. Engineers not only met the criteria, they quickly developed an upgrade with capabilities exceeding expectations. The operator control console and waste container transport cart were redesigned and replaced to make the system durable enough to handle three drums at a time with the capability of jogging individual drums. To be deployed in July 2001, the **Real Time Radiography Drum Handling System Upgrade** will reduce the load on the system and increase throughput to an average of four drums an hour. This new drum handling system will aid workers in complying with WIPP's waste acceptance criteria, and will go a long way to help the INEEL meet the shipment of 3,100 cubic meters of transuranic waste out of Idaho.



PN01-0312-01-03

An operator is running the drum handling system from its control console.



PN01-0312-02-32

Using the new joystick and control board, an operator can individually maneuver each drum.